

The Five Biggest Mistakes Made By Small Egg Farms

Part 4: Failure to Molt

Small flock owners hoping to maintain high egg production must manage their flock properly if they hope to make a profit selling eggs. In previous issues, I've explained the importance of selecting the right breed, feeding strategies and culling. Another important management technique I'll address in this issue is molting.

Molting is a natural process during which the hen stops laying and replaces her feathers with new ones. In a way, it's a chance for the hen to renew her feathers while replenishing her capacity to lay quality eggs. As a hen progresses through a laying cycle, she slowly loses calcium from storage areas in certain bones. This leads to thinner shells and fewer eggs as the season progresses. When a hen stops to molt, she gets time to return calcium to her skeleton and time for her hormonal system to regress, then slowly build toward another season of lay. Without molting, egg production would continue to decline, the shells would get weaker, and the hens will gain weight. Fat hens eat more feed and lay fewer eggs costing you profit.

If you allow your flock to produce eggs without the aid of lighting but using only natural daylight, most birds will molt starting the first two weeks of September. An easy way to remember when birds molt is to remember that it happens every year around the start of the Kansas State Fair. This is because the length of the day is growing shorter as the fall season approaches.

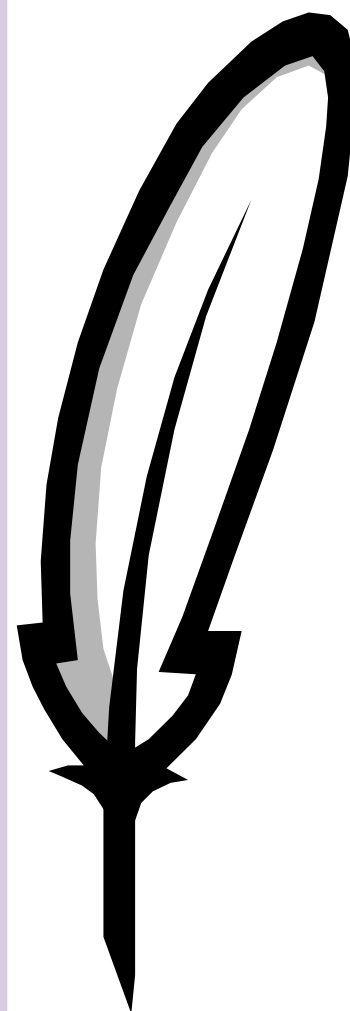
Chickens have a gland called the pineal gland, which serves as a kind of light meter. In the spring, as day length increases, this gland registers the total hours of light that the hen is exposed to during the day. At somewhere around 12 hours per day, the gland stimulates the hen to produce eggs. As the days continue to grow longer, the gland gets reset to the longer exposure time. Then in the fall, as the days get shorter, the gland is no longer stimulated and the hen begins the process of molting. So if you want to keep your hens in production and prevent the molt, you must provide enough artificial light to make the day appear to be longer and equal to the longest day of the year. In Kansas, you'll need about 16 hours of total light per day.

Lots of factors affect the exact date when a particular bird will begin to molt. Things like breed, body weight, age, and environmental temperature will all play a role. So if you have a small flock with several breeds, it's unlikely that the birds will all molt at one time.

Commercial egg producers use another method to molt chickens so that all the birds will molt together and return to egg production at the same time. This method involves feed removal and is somewhat controversial because feed is withheld from the hens until they lose 25% of their body weight. Feed is then returned and artificial light to 16 hours per day will bring them back into production in about 6 weeks. If you plan to use this method, you must be sure to monitor weight loss and do not allow the hens to lose more than 25% of their starting body weight.

Feed removal to induce a molt may seem severe, but it does mimic what happens in foraging birds. As the fall season progresses, there are fewer bugs and seeds available for the birds and they are soon short of food. If removing the feed is difficult in your situation, you could change the feed to an all grain diet or one that includes a lot of poorly digestible nutrients like wheat bran. This allows the birds to eat their fill but puts them on a diet in a manner of speaking. However, using this method will increase the time required for the birds to molt.

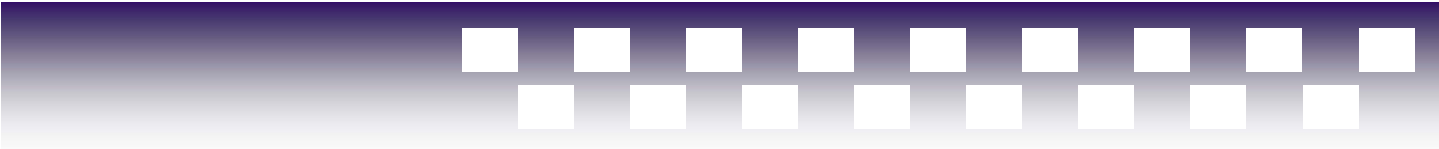
If you plan to molt your flock during cold weather, you must be careful not to allow the birds to be exposed to temperatures less than 45°F. Remember that the feathers are there partly to provide protection from the elements. Exposing the hens to wet conditions and



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low temperatures could stress them enough to make them sick or cause death.

Molting your hens is important. It rejuvenates them, allowing them to lay more eggs of higher quality. If you manage your birds so that they molt when you don't need the eggs, it will keep them at peak production when your highest demand occurs. You could also molt half your birds, keeping the other half in production until the molted hens start laying again.

By R. Scott Beyer

New USDA Poultry Processing Plant Opens in Kansas!

I've been waiting for Kansas to finally get a poultry processing plant that is willing to process anyone's birds under USDA inspection for a long, long time. Well, that time has finally come! Krehbiels Specialty Meats in McPherson, Kansas has recently announced that they are ready to process your birds. They are ready for chickens, turkeys, game birds, and they will even process ostrich and emus. They have been testing a pilot project and they are ready to take birds. And they will also further process poultry into other value added products. They AIR CHILL the carcasses which means they do not go through a chill tank of water.

Now you can have your birds processed at Krehbiel's, then you will be able to sell them through any store or market in Kansas and out-of-state as well. This will certainly open possibilities in niche marketing, alternative production, and processing of your home flocks. This is also great for participants in our Kansas State Fair Market Broiler Contest who need a place to process their project birds. I'll put more in the next newsletter. You can contact Krehbiels Specialty Meats at (620)241-0103. They are located at 1636 Mohawk Rd, McPherson, KS.

Questions for the Editor

For 15 years we have been raising chickens, we have Rhode Island Reds and Plymouth Rock mix. We have always eaten the eggs with no problems. Tonight I was cooking dinner and cracked an egg open and a worm was in the egg. It looks to be a roundworm, about three inches long with a diameter about as thick as a pencil lead. I eat three to four eggs daily and I am concerned about my own health and if I need to be treated and how I need to treat my chickens to prevent this from happening again.

Roundworms live in the digestive system, then they travel down and are often expelled in fecal matter. However, since both the digestive tract and the reproductive tract are physically connected at the cloaca, a roundworm can travel down, turn back up into the cloaca, then travel back up the reproductive tract where the egg is forming. It can then accidentally be packaged up into a developing egg. It's about a 1 in a million chance, but I've seen it before myself. It's not harmful, it just looks very unappetizing! And you don't need to worry about the eggs, you can eat all you want. To prevent this, simply worm your chickens. I like to use Piperazine pills on back yard flocks. You can give each a pill and know who's had the medicine and who has not. If you use the water form, you never know who drank what. It's effective and cheap. You can also ask your vet about worm treatment.

I scraped some old paint off a garage and noticed that my hens were scratching in the area. If this paint contained lead, could my hens have eaten some paint chips and deposited lead in the eggs?

Yes. Studies have shown that hens which have consumed lead based paint will lay eggs with high levels of lead. Almost all of the lead will be in the yolk and since birds are often attracted to shiny objects, they might have picked out the paint chips. Lead can be a serious threat to mental development in children. If you have old barns or houses with peeling paint, either test the paint for lead or keep your chickens away from it. Kansas has very weak laws when it comes to lead paint testing so you need to be proactive and have it tested if you want to be sure.



Portable Coops and Chicken Tractors

More and more people are becoming interested in growing poultry in portable coops or so-called “chicken tractors.” A person on the east coast named Joe Salatin wrote a book about growing meat type birds in small portable pens that he called chicken tractors “ISBN Number 0-9638109-0-1” This book was one of the first to popularize the pastured poultry method of growing chickens.

When using a portable pen, the purpose of growing birds this way is to give them access to fresh grass on occasion. The birds are able to pick up nutrients from the grass as well as bugs and other things. Before the grass is completely dead, the birds are moved to another area of fresh grass by moving their entire house and portable pen.

When I was a kid growing up, my family always had a chicken pen in the backyard. We have various types of poultry including ducks and geese, but mainly kept a few chickens for eggs. And not once do I remember seeing grass grow in or even near the pen because the birds kept is completely void of any grass. Even when I added onto the pen and gave them more space to roam in, grass could rarely grow. However, it was always interesting to note that when I tossed in grass from the fresh mowed lawn or vegetables from the garden, the birds always seemed to consume it readily. So moving birds about in portable pens is something that you may want to consider. Think about when you graze cattle or horses – you never let them overgraze the pasture until all vegetation is completely gone. So it makes sense to try the same thing with poultry.

If I asked 100 people to draw me the perfect chicken coop, I would certainly get back 100 different opinions and designs. So if you search the internet and various books or publications, you’ll find a wide variety of different types of portable coops that you can build. The best advice is to build something you are comfortable with. You should also consider what materials you have laying around that are not being used.

People ask my advice on how they should build their coop and here are some things I think they should consider. First, the most important thing to think about is the welfare of the birds. You must build a coop that will not allow the birds to get too cold or too hot and will meet all their behavioral needs. Second, you should think about ease of use. One thing is for certain when it comes to people, most of us want to spend as little time as possible doing the daily chores. So make the feeder accessible, the waterers automatic and the pen as easily movable as possible so that the chores become a pleasant duty rather than a chore. And finally, think about the cost of building the portable coop. I’ve seen coops made from salvaged plywood, old t-posts, water pipe salvaged from old homes, and just about anything else you can imagine. The less money you have to put into building the coops means that you’ll get more profit in the end. A couple of design considerations that are tough to deal with in Kansas are the wind and predators. You need to be sure your design doesn’t blow over easily when we have high winds. And I like to incorporate some type of passive predator preventative such as an electric fence or buried fence material around the edges.

We have a garden behind our research farm where we throw a lot of composted manure. Because we don’t have a lot of time to spend with the garden, as you can imagine, it becomes one giant weed patch before the year is over. We are going to design our own chicken tractor and build it in our spare time to see what good it could be used for when incorporated into a vegetable garden. And as you can imagine, this being a state facility, we don’t have a lot of funds to build it so it might not be the prettiest thing to look at but we’ll try to make it functional. We will keep you updated on our progress in the newsletter.

Sustainable Chicken Gardening

I remember my great grandfather’s chicken pen in his backyard. He had a long, skinny house with three doors on the front. The three doors lead to three different large pens, each pen was about the size of your average home vegetable garden. Every spring, he would go out and close one door so the chickens would have no access to the yard in front of the door. And that’s the area where he grew his vegetable garden for the next year. In the fall, he would open the door and allow the birds to clean out what was left in the garden. At the time, I didn’t know too much about fertilization and things but it sure seemed like his garden grew well. One thing I definitely noticed though was the lack of weeds in his garden. I hate weeding a vegetable garden. Now I wonder just how much fertilizer the birds spread in the garden throughout the year as well as how many weed seeds they eliminated. Perhaps my great grandfather knew more about sustainable farming than I have given him credit for.



Each year at the 4H Poultry show at the State Fair, judges will often make comments on some of the birds. I would like to pass on some of these comments that judges have made so that you can learn from them and try to improve your exhibit at the 2005 competition.

Wrong breed written on the cage card - You can use the Standard of Perfection to compare the pictures in the book to your bird to be sure that you enter the correct breed. If you enter the wrong breed on the score card, a judge is allowed to disqualify your entry.

Too small or too large for the breed - Each breed of chicken will have its own optimum body weight. Check the Standard of Perfection to be sure the bird you enter is of the proper body weight.

Poor feathering, dirty feathering - Be sure you manage your birds well so that the feathers are not tattered or dirty. This indicates that you did not work with the birds much so the judge will reduce your award.

Mites - Don't bring birds with mites to any fair or show! Treat the birds at home and keep them in good health.

Too young or too old - Be sure the birds are the proper age when entered at the Fair. Also, make sure you do not enter an old hen in the young class, or vice versa. Anything less than a year old should be shown in the young bird class, and anything older should be in the old bird classes.

Comb type - Be sure to check the Standard of Perfection to make sure the type of comb your bird has is the one that the breed should have. Combs that should be spiked should not have more than one spike. Or, for example, silkies shouldn't have a single comb.

Twisted feathers - twisted feathers in the show breeds are not allowed.

Stubbs – stubbs are small feathers or parts of feathers that grow on the legs or feet in areas that should NOT have them. Small stubbs are generally removed prior to exhibition. Check the Standard of Perfection to determine which breeds should not have feathers on toes and legs.

Poor or foreign shank color – every breed of chicken has a certain shank color. Off color shanks, spotted scales, and foreign color can be a disqualification. Check the Standard of Perfection for the specific breed requirements.

Color off - make sure the bird is the proper color for the breed. The intensity or darkness of the color is also important. Several of the birds in this contest lacked the true color of the breed or just weren't what the breed should have looked like.

Ear lobe not dubbed - Some breeds require dubbing of the comb or ear lobe. Check the Standard of Perfection.

Not Pure breeds - Be sure that only pure breeds are entered in the pure breed classes. Production birds in the pens of three, however, are allowed (hybrids). Many egg or dual purpose breeds are crosses and cannot be entered as a pure breed. Many egg layers sold by mail are crosses that cannot be entered into the standard breed classes (For example Comets or Cherry Eggers).

Rouen ducks - There are commercial Rouen ducks and show-type Rouen ducks. The commercial breeds are much smaller than the show-types and should be listed as commercial Rouens.

Please remember that an estimated 100,000 to 120,000 of the people that attend the Kansas State Fair will pass through the poultry entries. So make sure your birds look the best they can be! If you have questions, or if I can help you in any way, please call me at (785)532-1280.

Hope to see you in September! Scott Beyer, Kansas State University, Extension Poultry Specialist

National Poultry Judging and Egg Conference Results

We are proud to have represented Kansas and Jefferson County 4-H at the National Conference. The Jefferson County 4-H Poultry Judging Team of five represented the State of Kansas at the National Poultry Judging and Egg Conference on November 15-18, 2005, in Louisville, Kentucky.

The Kansas Top Individual, Cody Heston son of Duane and Linda Heston, Oskaloosa, placed 3rd Overall Top Individual, 6th in judging past production hens, 10th in judging market poultry. John Hensleigh placed 9th as a Individual in Judging Market eggs.

The Kansas Team members were Dillon Robbins son of George and Rhonda Robbins, Oskaloosa, Myla Heston daughter of Duane and Linda Heston, Oskaloosa, Johna O'Trimble daughter of Jim and Sherry O'Trimble, Perry, John Hensleigh son of Robb and Peggy Hensleigh Winchester. The team placed 16th Overall and 6th in judging market eggs.

The Kansas Avian Bowl Team placed 9th in the Avian Bowl contest. Members of the team were Cody Heston, Dillon Robbins Myla Heston, John Hensleigh. The Team was recognized for their achievements at the awards banquet.

While in Kentucky, the team attended a Poultry Career Opportunity Workshop. They also toured Louisville Slugger Bat Company, Churchill Downs and the North America Livestock Expo.

George Robbins, Jefferson County 4-H Poultry leader attended the conference as their coach. Congratulations! Judging Team Members! Your hard work has paid off in more ways then words can say.

George Robbins

Sources of Fertile Eggs for Hatch Projects and Concerns with Avian Influenza

Teachers have expressed some concern about continuing school chick hatch projects in class due to the news about avian influenza (AI). At this time, there is no concern for alarm since wild or domesticated birds or waterfowl have not tested positive for any form of AI in North America. Teachers should continue to use the hatch projects to teach handling and hygiene techniques like they have in the past as a preventative measure for bacteria and viruses that are normally present.

If teachers are interested in obtaining sources of hatching eggs for their class projects, they should consider a commercial source. Commercial hatcheries will not work directly with teachers on a small scale, so we've been coordinating a group who orders hatching eggs each spring through KSU Poultry Extension. The eggs are from commercial sources whose breeder flocks undergo strict testing and surveillance for any disease. They are also monitored for high fertility rates, which can increase the hatch rate. Unfortunately, these eggs cannot be mailed but must be picked up from the KSU Poultry Research Farm. Sedgwick County Extension orders several dozen and may volunteer to bring the eggs to a drop point at their facilities if you contact them and make arrangements. The eggs will available at the KSU farm on March 28 and must be ordered in advance. The price usually runs from 2-\$3 per dozen. Contact Scott Beyer, Extension Poultry Specialist, if you would like to coordinate hatching eggs for that date.



If you would like to receive an electronic copy of the Feather Report, please send your email address to poultry@ksu.edu

The Feather Report is published for the purpose of communicating with people in the poultry industry, gamebird industry, small flock owners, ratite producers, & anyone with an interest in feathered creatures. It is distributed at no charge and Kansas citizens can be place on the mailing list by contacting

R. Scott Beyer
Extension Specialist, Poultry
Animal Sciences and Industry
130 Call Hall
Manhattan, KS 66506-1600
Phone: 785-532-1201
Fax: 785-532-5681
Email: sbeyer@ksu.edu

Kansas State University

R. Scott Beyer



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